

## **Ecological Sustainability Forum**

**August 6<sup>th</sup>, 2013**

Breakout Group: Climate Change (sea level rise)

Presenting Preliminary Findings: Emrys Treasure, Lisa Jennings

Note Taker: Lori Barrow

### **Climate Change and Francis Marion National Forest**

The Francis Marion National Forest recently hosted an Ecological Sustainability forum at the Sewee Visitor and Environmental Education Center in Awendaw, South Carolina. During this meeting, participants had the opportunity to attend two out of four breakout groups to hear presentations and provide feedback on some of the preliminary findings as they related to forest planning. One such breakout group highlighted the potential impacts and effects of climate change on the Francis Marion National Forest. Breakout sessions were held back-to-back, with both breakout sessions for climate change well attended with ten and twenty-two participants, respectively. Presenters focused primarily on sea level rise which is projected to increase and alter the composition and structure of barrier islands, coastal marshes and tidal forests. In addition, as sea levels rise, the potential for saltwater intrusion into coastal freshwater aquifers could lead to contamination of drinking water and disrupt habitat suitability for freshwater species.

The presentation and open discussion evoked thoughtful conversation and identified common themes among participants concerns. After the breakout sessions, Lisa Jennings gave a summary report on the findings and primary comments. The results below represent some of the specific questions and concerns revealed by the climate change breakout session.

- Numerous participants expressed concern over rising sea levels. Contributors had concerns regarding animal and plant communities (both terrestrial and marine) and their ability to adapt to sea level rise.
- Several participants voiced alarm on the likely impacts future sea level rise will have on developed barrier islands at Cape Romain National Wildlife Refuge, which serve as a buffer for Francis Marion National Forest and serves as a refuge for migratory waterfowl, shorebirds and several endangered species such as the loggerhead sea turtle.
  - How will the Francis Marion work with surrounding landowners to help mitigate or adapt to projected future change?
- Attendees were curious about the effects climate change would have on their property values. Conversely, several voiced concern about potential negative impacts on recreational experiences or socioeconomic viability such as the ability to harvest sweet grass or run outfitter/guide services.
- Concern regarding extreme weather events was raised several times. How will the Francis Marion prepare and react to severe storms, higher temperatures, drought and wildfire in the face of future change? What have they learned from Hurricane Hugo that they can incorporate into the new plan?
- Several attendees were curious about the future viability of depression swamps.

- One participant had concerns regarding development impeding landward migration as structures may block the landward transport of sand and sediment.
- Participants were interested how the Francis Marion was going to work with adjacent landowners to promote migration paths for habitat connectivity and viability. Similarly, one participant suggested the forest set objectives and management strategies beyond its own proclamation boundaries (e.g., Longleaf pine alliance boundaries).
- Two participants raised concern about the change in temperature, rainfall patterns and shifting sea levels will have on the physical structure of soil.
- One participant raised concern about the preference or priority of converting Loblolly pine to Longleaf Pine.

Several broad findings were revealed during the breakout sessions which are presented below.

- Broader, regional level analysis and collaboration are needed for sea level rise monitoring and modeling, including the potential inland effects and management actions.
- The Francis Marion should focus on building relationships with adjacent land management agencies and owners to help identify potential migration paths and opportunities to work together for habitat connectivity and transitional areas.
- The potential impacts of extreme weather events need to be identified and a management strategy should be developed that identifies how the Francis Marion will work with adjacent land holders to build ecosystem and community resiliency.